Working Together on the Web, Working Well?

Innovation of a Research Work Environment

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Overview: Working Together on the Web, Working Well?

- The larger project
- Biodiversity research online “Scratchpads”
- Data: Working on the web?
  - Use of the Web (interviews + Web data)

- Data, Case: Livingcreatures.org
  - Who are the online community members ?
  - With whom did they collaborate? (bibliometric + SNA)

- Next steps

Larger project

- ViBRANT (dec 2010-2013, http://vbrant.eu/)
  - Virtual Biodiversity Research and Access Network for Taxonomy

- Support the development of virtual research communities involved in biodiversity science

- VU-University Amsterdam and the social design of the e-infrastructure

Social design

Where we like to go:

- What is the impact of working online for science, researchers and science organisations?

  -To what extent does it change science and scientific practice?

  -To what extent does it help science? Contribute to more knowledge? better knowledge?

  A more efficient use of talent and resources?

  Increased visibility and use of output?

Online communities in Biodiversity Research. Why go online?

The challenges of 21st century taxonomy for biodiversity research

Goal…

- Inventory the Earth's species
- Document their relationships
- "Publish" & apply these data

Data set…

- 1.8 M described spp. (10M names)
- 300M pages (over last 250 years)
- 1.5-3B specimens

People…

- 4-6,000 taxonomists
- 30-40,000 "pro-amateurs"
- Many more citizen scientists?

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Scratchpad landscape

Use of the Scratchpads

Today:

- > 3000 registered users (members)
- > 200 sites
- 800-1600 Web visits per day

Site use among maintainers*:

1) For research dissemination
2) For data management purposes
3) For data sharing

50% of the sites “community of -1” Barrier..finding the right people?

*Based on interviews with 45 maintainers (out of 107 and out of 129 sites) (Smith, V .S, Duin, D et al (2010)

Web visits

Can we use web data to identify the stretch of the audiences to the scientific community websites Scratchpads?**

Number and categories of Internet Service Providers (ISPs)

Myspecies.info (Oct. 1,2010 -M		
All ISPs*	9212	100
ISPs* without commercial ISPs	2316	25

* Average time on site

Categories of ISPs	Number	%
Government	204	9%
Non-profit	41	2%
Health		%
Art/culture/ Media/publishing	25	1%
Travel		
Other	1	0.04%

university college london

kenya forestry research institute - kefri

national botanical garden of belgium

istituto zooprofilattico sperimentale del piemonte public

european parliament

canadian house of commons

smithkline beecham biologicals

** Data presented at Altmetrics workshop of the ACM WebSci '11

Working online in biodiversity research

Livingcreatures.org, online community of 11 members

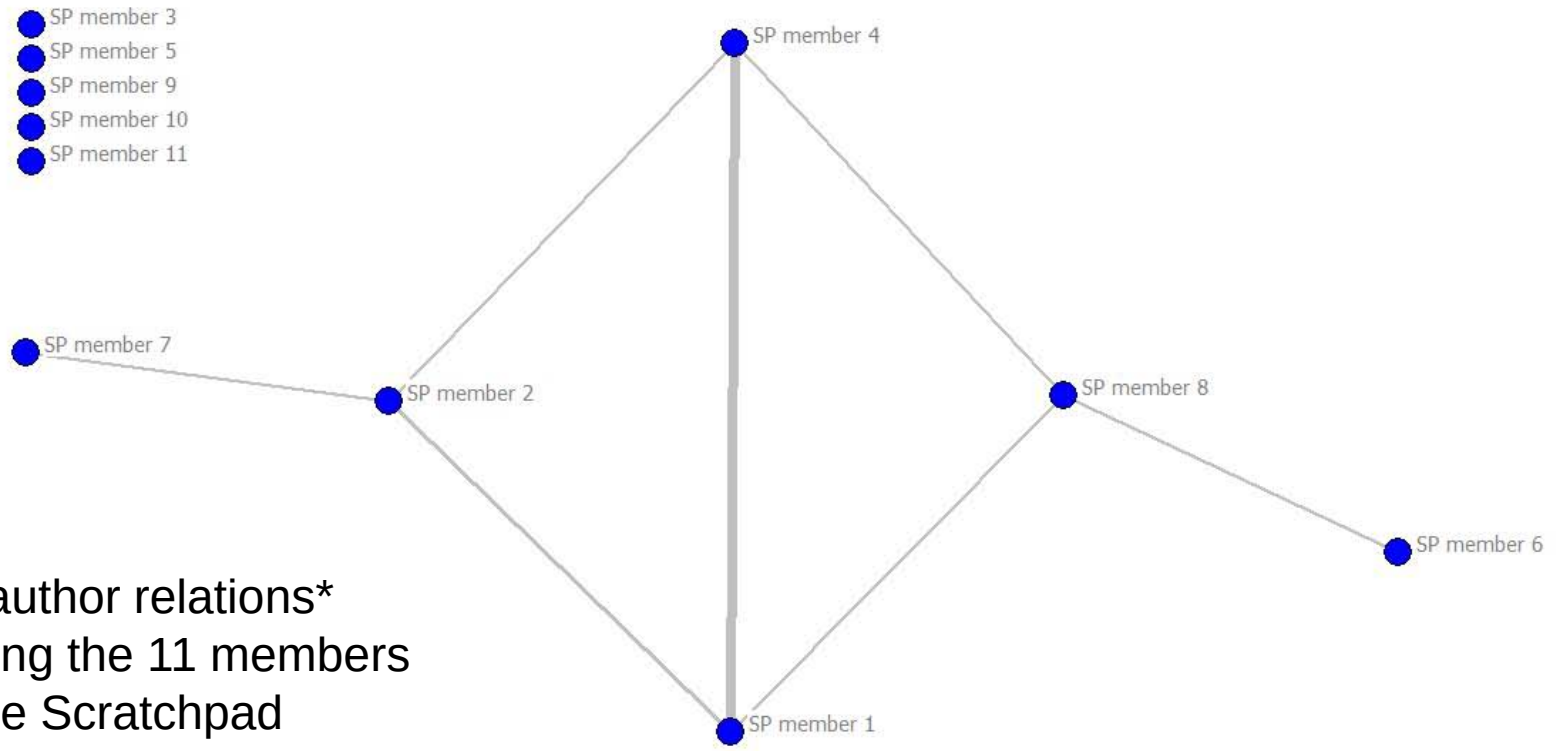
- To what extent do co-author networks of Scratchpad members overlap?

! Co-author relations are not the only relevant relations in academia

Knowledge creation needs...

- ...knowledgeable people to talk to each other (CoPs)
- ...the power of Communities of Practice because “knowledge shared is knowledge doubled”(Sveiby)
- Web 2.0 to facilitate CoPs across geo distances
- combining divers *and* overlapping knowledge inputs between exchange partners (McFayden et al 2009)

Case study: Livingcreatures.org

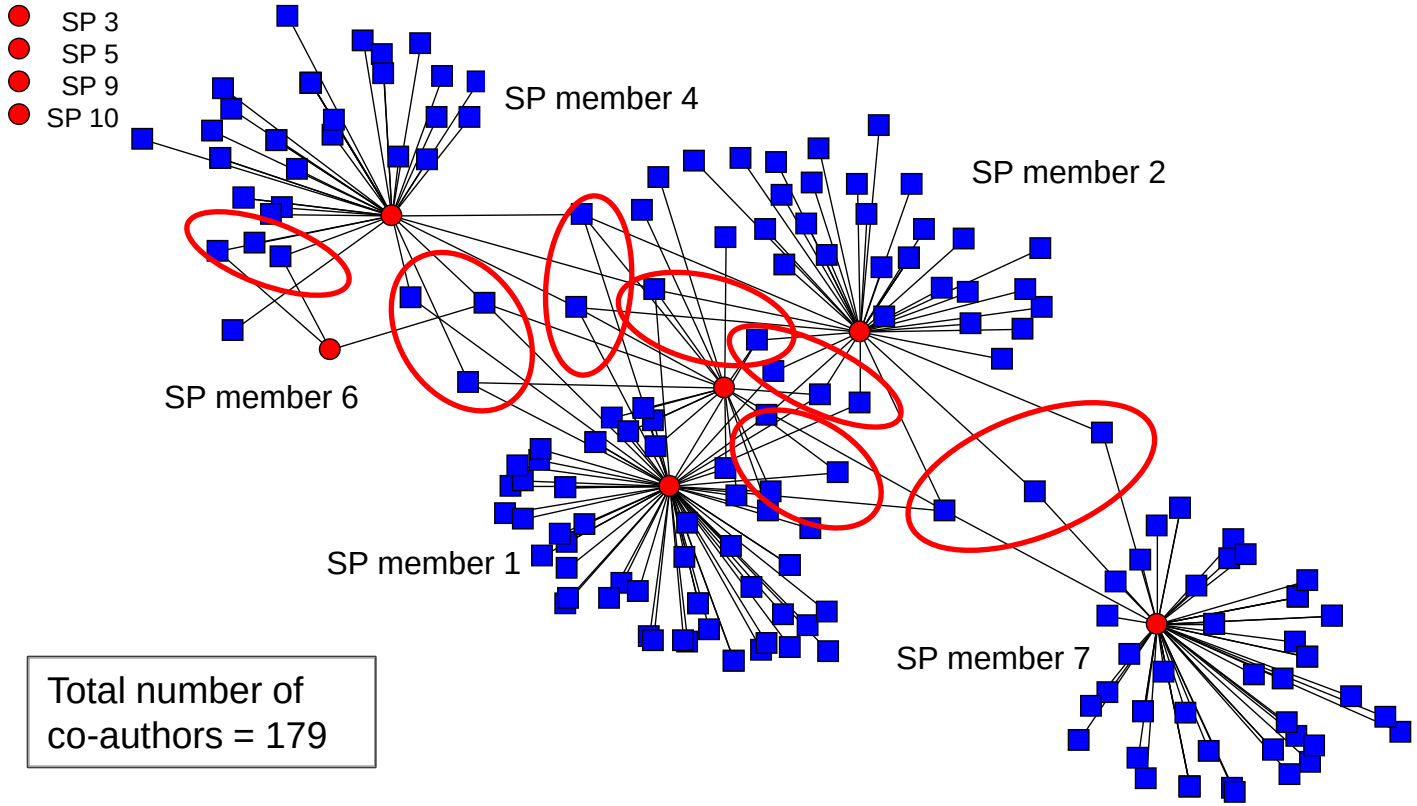


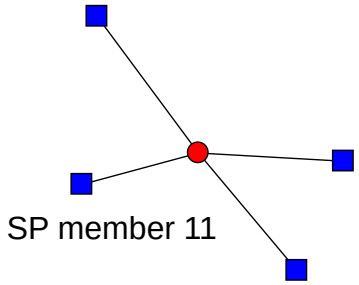
Co-author relations* among the 11 members of the Scratchpad between 2001-2010 *

based on data of the Web of Science & Google Scholar

Co-author ties (2001-2010)

Scratchpad members	number of papers	number op papers with co-authors	number papers with 0 co-author	number of papers with > 2 authors	max number of co-authors on 1 paper
SP member 1	30	27	3	18	19
SP member 2	18	14	4	13	9
SP member 3	0	0	0	0	0
SP member 4	16	15	1	14	6
SP member 5	0	0	0	0	0
SP member 6	1	1	0	1	2
SP member 7	17	16	1	11	16
SP member 8	70	61	9	36	4
SP member 9	0	0	0	0	0
SP member 10	0	0	0	0	0
SP member 11	3	3	0	1	2
	155	137	18	94	





Scratchpad (SP) members and their co-author relations between 2001-2010 *

*Incomplete network for 1 Scratchpad based on data of the Web of Science & Google Scholar

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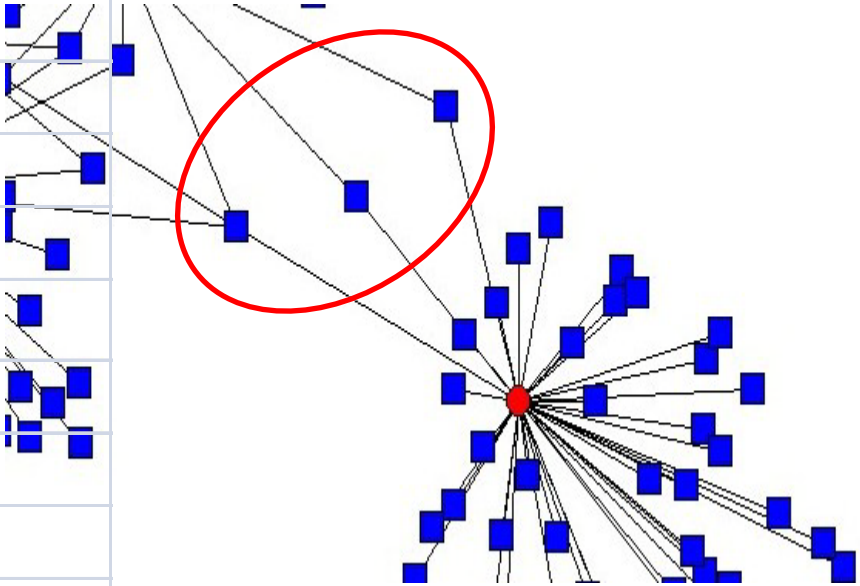
	Co-author overlap
Scratchpad member 1	4
Scratchpad member 2	4
Scratchpad member 3	0
Scratchpad member 4	4
Scratchpad member 5	0
Scratchpad member 6	1
Scratchpad member 7	1
Scratchpad member 8	4
Scratchpad member 9	0
Scratchpad member 10	0
Scratchpad member 11	1



Observations and ?

- What is a large or small co-author network? Workforce of around 4.000-6.000 experts; 179 co-authors of the experts (but also discipline dependent?)
- Value of co-author ties may differ (study whole network)
- Define “divers” and “overlap”

Observations and ?

Co-author ties for knowledge creation:

- Compare before and after Scratchpads
- Causality - Control group (but even then...)

- Gap in interviews “what are barriers for collaboration”-
- Scale and technical complexity of data
- Need to team-up

References

Smith, V .S, Duin, D. et al (2010) . *Motivating Online Publication of Scholarly Research Through Social Networking Tools*. Conference Proceedings paper delivered at COOP2010, 18 May, 2010 as part of a workshop titled Incentives and Motivation for Web-Based Collaboration

- http://scratchpads.eu/
- http://vbrant.eu/

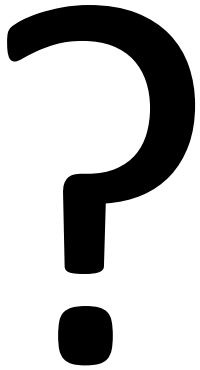
Acknowledgements

Research supported by:

- EU / ViBRANT

- Vince Smith for sharing presentation material

Thank you



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